

Page 6, before line 34, insert --BRIEF DESCRIPTION OF THE

95 DRAWINGS--.

Page 7, before line 11, insert --DETAILED DESCRIPTION OF THE

96 EMBODIMENTS--.

IN THE CLAIMS:

Kindly amend the claims as follows:

1. (Amended) A lithographic projection apparatus comprising:

[an] a projection beam illumination system [for supplying] which supplies a projection beam of radiation;

a first object table for holding [patterning means capable of patterning]
a projection beam patterning device which patterns the projection beam
according to a desired pattern;

a second object table for holding a substrate; and

a projection system [for imaging] which images the patterned beam
onto a target portion of the substrate; [and]

a reference frame; [characterized by:] and

a position detection device comprising:

a radiation source mounted on said reference frame;

a two-dimensional radiation detector mounted in a fixed
position on said reference frame; and

a mirroring device mounted on one of said object tables that is
moveable relative to said reference frame so as to reflect radiation
emitted by said radiation source toward said radiation detector.

3. (Amended) Apparatus according to claim 1 [or 2] wherein said radiation source is a source of monochromatic radiation.

4. (Amended) Apparatus according to claim 1[, 2 or 3] wherein said mirroring device is a retro-reflector.

5. (Amended) Apparatus according to [any one of the preceding claims] claim 1 wherein said radiation source comprises a light source mountable away from the reference frame, beam directing optics mountable on said reference frame and an optical fiber to couple said light source to said beam directing optics.

6. (Amended) Apparatus according [any one of the preceding claims] claim 1 wherein said radiation source comprises one of a laser diode[, or] and an LED as a light source.

7. (Amended) Apparatus according to [any one of the preceding claims] claim 1 wherein said two-dimensional position detector is a two-dimensional PSD, or a CCD camera, or a four quadrant photo-detector.

8. (Amended) Apparatus according to [any one of the preceding claims] claim 1 wherein said retro-reflector comprises a trapezoid form of a material transparent to said radiation and having three mutually perpendicular surfaces meeting at a corner, said three surfaces being provided with a

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reflective coating.

9. (Amended) Apparatus according to [any one of claims 1 to 7] claim 1 wherein said retro-reflector comprises a convergent lens and a reflective surface, said reflective surface being spaced a distance from said lens equal to the focal length of said lens.

10. (Amended) Apparatus according to [any one of the preceding claims] claim 1 comprising three position detection devices as therein defined.

11. (Amended) Apparatus according to [any one of the preceding claims] claim 1 further comprising an incremental position sensing device [for detecting the] to detect a position of said moveable object table in a detection range wider than that of said position detection device and [means for combining] a combiner, which combines output signals from said incremental position sensing device and said position detector to determine an absolute position of said object table in said detection range.

12. (Amended) A method of manufacturing a device [using a lithographic projection apparatus comprising:
an illumination system for supplying a projection beam of radiation;
a first object table for holding patterning means capable of patterning the projection
beam according to a desired pattern;
a second object table for holding a substrate;

a reference frame; and

a projection system for imaging the patterned beam onto a target portion of the substrate; the method comprising the steps of:] comprising:

providing a substrate provided with a radiation-sensitive layer to [said] a second object table;

providing a projection beam of radiation using [the] an illumination system;

[using said] patterning [means to endow] the projection beam [with] to form a pattern in its cross section; and

projecting the patterned beam onto said target portions of said substrate; [characterized in that:]

[prior to or during said step of projecting, one of said object tables that is moveable relative to said reference frame is determined to be in a reference position by the steps of]

determining a reference position of one of said object tables relative to a reference frame by:

emitting radiation from a radiation source mounted on said reference frame toward a mirroring device mounted on said one object table[,];

reflecting the radiation; [by said mirroring device] and

detecting the reflected radiation in a two-dimensional radiation detector mounted in a fixed position on said reference frame.

13. (Amended) A method according to claim 12, [wherein said lithographic projection apparatus further comprises an incremental position